
# Trust Water Rights Program

## Guidelines

Publication #92-88

# GUIDELINES

# TRUST WATER RIGHTS PROGRAM

# DEPARTMENT OF ECOLOGY

September 10, 1992

## NOTICE

### August 24, 1993

These guidelines were adopted in 1992 in accordance with Chapter 90.42 RCW, the statute authorizing the trust water rights program.

The 1993 legislative session resulted in amendments to the statute, eliminating the requirement that the Department of Ecology identify eight Water Resource Inventory Areas for program implementation. The trust water rights program now applies statewide.

No amendments are considered necessary to the guidelines at this time; this document will now apply statewide.

# EXECUTIVE SUMMARY

The trust water rights guidelines document summarizes the background and purposes of the program, describes technical and administrative concepts for evaluation of trust water rights proposals, and outlines the process and criteria for implementation. The trust water rights program codified at Chapter 90.42 RCW applies to ten water resource inventory areas (WRIAs) of the state. Two areas have been designated for implementation: the two regional pilot planning areas, the Methow and Dungeness-Quilcene basins. Up to eight additional areas containing "critical water supply problems", four on each side of the Cascade Mountains, may be identified for program implementation. The trust water rights concept will be tested and more information gathered for refinement of the guidelines and the legislation. An earlier trust water rights statute, Chapter 90.38 RCW, applies only to the Yakima basin and is not directly administered through these trust water rights guidelines.

The trust water rights statute has flexibility, for several types of transfers of water and water rights: e.g., dry year lease options, transfer of net water savings to other beneficial uses, and gift or purchase of water rights. Transfers are voluntary and may be temporary or permanent. All trust water rights are to be managed by the Department of Ecology.

A key concept of trust water rights is the maintenance of the original priority date once water is transferred. Water ordinarily subject to relinquishment under Chapter 90.14 RCW is not relinquished in the trust program. Conserved water which is not managed through the trust program may be considered waste and subject to relinquishment.

Evaluation of the amount of water transferable to other uses will be site-specific. The process will, in many cases, be very data-intensive. Many factors will influence the amount of water which may be transferred to other beneficial uses: the amount of water which has historically contributed to return flows, the amount which can be shown, if any, to be salvaged water (see glossary), the amount which is determined to have been used with reasonable efficiency, and other characteristics of the water right being evaluated. A high level of protection is afforded to other existing water rights; potential third party effects are to be carefully evaluated and monitored during creation and implementation of a trust water right.

The guidelines contain criteria which will be used to evaluate water conservation projects related to trust water right proposals for funding and also for considering WRIAs for program designation. The types of public benefits to be included in evaluating funding proposals and for allocating trust water are also described:

A report to the legislature containing recommendations for refinements is to be made by December 1993. This document has been drafted with the assistance of the Trust Water Rights Advisory Committee (members listed in Appendix A).

TABLE OF CONTENTS

INTERIM TRUST WATER RIGHTS GUIDELINES

# TRUST WATER RIGHTS PROGRAM

September 10, 1992

## I. INTRODUCTION

In 1991 the Washington state legislature instructed Ecology to develop a state trust water rights program in response to "the need to develop and test means to facilitate the voluntary transfer of water and water rights, including conserved water, to provide water for presently unmet and emerging needs". The statute broadly defines "presently unmet needs"; presently unmet water needs will be prioritized over future water needs. Chapter 90.42 RCW contains directions, definitions, and a schedule directing that guidelines be adopted by July 1, 1992. This piece of legislation was the second relating to trust water rights; it was preceded by the 1989 Yakima Basin Trust Water Rights Act (Chapter 90.38 RCW).

Information gathered during the initial implementation will be used either to amend the guidelines or to develop rules and will form the basis of a report to the legislature in December 1993 containing recommendations for future application. The guidelines apply only to the areas designated according to the legislation. These include the two regional pilot planning areas: the Dungeness-Quilcene and Methow basins; and, up to eight water resource inventory areas (WRIAs), four on either side of the Cascades, identified as having critical water supply problems (unidentified as of this date). The Yakima Basin Trust Water Rights statute (Chapter 90.38 RCW) applies in the Yakima basin separately from Chapter 90.42 RCW.

Trust water voluntarily transferred to the State of Washington and managed by the Department of Ecology in the trust water rights program can be reallocated to either instream or offstream uses, under certain limitations. The legislation provides broad latitude regarding the types of transfers which can be considered. Among the possibilities are: dry year lease options, temporary or permanent changes in the place or type of use of a water right (from offstream uses to instream flows, for example), water banking managed by the state, the transfer of water conserved by a water conservation project, or by gift.

Historically, appropriated water which became excess to the user's needs through conservation was returned to the stream for use by junior appropriators or future uses. Within the constraints of not impairing other water rights or expanding the water right, some water previously considered excess under standard water law tenets may now be allocated to other uses. Trust water rights maintain the priority date of the original water right, unless the water right is split between the original user and the state, in which case the trust water right is inferior in priority. Trust water rights can redirect the use of conserved water. The amount of water which was previously beneficially used as part of the water right forms the basis for transfer to a trust water right. Water which has been

beneficially used and then transferred to the trust program is not subject to relinquishment.

Trust water rights can derive generally from two sources. Water saved through state or federally funded conservation and available to other uses without impact on existing rights, "net saved water", can be acquired by the state from the conserver through a voluntary agreement. In providing state funding assistance, the state may negotiate with the recipient regarding the transfer of net saved water. Net water savings resulting from federal funding can be treated in the same manner as that resulting from state funding. A second means of acquisition is the voluntary transfer to the state of an existing water right (or portion thereof), through lease, donation, or purchase. Private or public monies could be a source of funds for these types of transfers.

These guidelines are intended to provide general guidance to the Department of Ecology and others involved or interested in the acquisition of trust water rights. Each situation is different and will require flexibility in assessing varying conditions of water use, hydrology, and third party concerns. The legislature intended that the trust water right concept be tested in a variety of situations and water uses to assess its utility. Implementation in the pilot planning areas and WRIAs with critical water supply situations will result in a better understanding of the issues and the mechanics of applying trust water concepts, and improvements to the overall program.

One goal of the program is to promote education about trust water rights. This will be accomplished at the basin level in areas chosen for implementation; efforts will also be aimed at a broader audience on a statewide level.

Ecology is developing these guidelines in consultation with a broad range of interested parties. A Trust Water Rights Advisory Committee advised Ecology on drafting the guidelines. See Appendix A for a list of members.

A glossary of terms used in this document is included for reference. The first time that each term is used in the text it is underlined.

## II. PURPOSES AND OBJECTIVES OF THE GUIDELINES

To describe the procedures by which water or water rights may be voluntarily transferred to the state's trust water rights program through purchase, gift, lease, or funding of water conservation projects.

To describe the criteria for consideration of funding, evaluation of public benefits, and prioritization of projects.

To provide guidelines for the testing and implementation of trust water right provisions in Chapter 90.42 RCW in accordance with regional pilot plans or agreements in selected

Water Resource Inventory Areas containing critical water supply problems, designated per the legislation. Guidelines for the trust water right areas under Chapter 90.42 RCW will be reviewed for applicability to Chapter 90.38 RCW in the Yakima basin.

To provide information to the state, participants in the program, and other interested parties for program evaluation and recommendations to the legislature for further refinement.

To address topics listed in the legislation and additional necessary information, including the following:

Methods:

- to determine net water savings and affected reach(es);
- to address third party impacts;

Criteria:

- for determining the portion. of net water savings that may be conveyed to the state;
- for prioritizing water conservation projects;
- for designating Water Resource Inventory Areas with critical water supply problems;

A description of potential public benefits;

Implementation:

- contracting procedures;
- management issues.

## III. TECHNICAL CONCEPTS AND TRUST WATER RIGHT EXAMPLES

This section provides a brief discussion of technical concepts and how these have been defined or used in the guidelines.

The many paths by which water moves, from diversion to use and return of unconsumed water to the source or other water body, can be highly complex. The technical considerations associated with any significant change in a water system are also complex. Additional complications are added when subsequent use of return flows or seepage water associated with the use must be accounted for and protected.

These complexities require that as thorough an understanding as possible be developed of the water system being evaluated for changes. In particular, the fate of diverted waters both, before and after proposed changes are implemented must be understood. Without such information, many attempts to secure trust water rights will not be successful.

Many options for trust water rights exist, since these can be temporary or permanent transfers of either water or water rights. There would generally be two bases for creation of a trust water right: 1) a water right holder continues to use his or her original water right, but becomes more efficient in the use and has water to transfer to the trust water right program, or 2) a water right holder permanently or temporarily forgoes the use of a water right (or part of a water right) and transfers the unused water to the trust water rights program.

Water diverted from a stream or aquifer for offstream uses either is (1) lost from the stream system through consumption (such as plant use in crop irrigation, consumption through industrial processes, or evaporation), percolation to an inaccessible or unusable aquifer, or interbasin transfer, or (2) makes its way back to the stream as surface and subsurface flows. The quantity of water which returns to the stream system after diversion and use is termed return flows. Many uses which divert water for consumptive uses return some of the water following the beneficial use, thereby having components of both consumptive use and return flows. Domestic in-house use of well water with a septic system can be one such use.

At some point downstream from the diversion point, most or all of the return flows will have returned to the river or stream. In many cases, this point may be identifiable, either through direct surface water returns or geological features which indicate that ground water is feeding the stream flows. The affected reach is the reach or reaches in which changes in the historical pattern of water flow and distribution occur due to water conservation project or other alteration in the quantity or nature of water use. The reach between the diversion point and the point at which return flows have returned to the stream is the affected reach.

Water is consumed by many means, both on-farm and off-farm and in other uses. Some of these include plant use in crop irrigation, evapotranspiration along seepage areas or in wetlands, evaporation through open conveyance systems or ponds, through human consumption, or by use in industrial processes. Water consumed in these ways does not return to the stream system. Consequently, consumed water previously lost from the stream system and made available by a water right holder forgoing use or by improving water conveyance efficiencies is highly eligible as a trust water right. Reduction of these consumed water losses is commonly referred to as salvage.

With regard to the portion of the water that is not consumed but makes it way back to the stream system as return flows, improved water conveyance and application efficiencies can also result in trust water rights. However, in this case the potential use of these return flows by others must be taken into account.

Trust water rights may apply either to surface water diversions or ground water withdrawals. For the purposes of illustration, surface water diversions have been used as examples.

## A. Example 1

An irrigation system might plan to continue irrigating its legally allowed acreage while improving efficiency within the system. Improved efficiency could reduce the amount of water needed for canal system operation and result in less seepage or operational spill. These can contribute to return flows to the stream, either through surface or ground water returns. An additional source of return flows would include deep percolation below the root zone from application to a crop. Return flows are relied upon by downstream users in many cases as a source of water. Please refer to Appendix B for illustrations and details.

A water conservation project which reduces diversions may create the potential for a trust water right for instream flows in the affected reach immediately below the diversion point. The stream reach below a large diversion is often where instream flow improvement is most critically needed. Downstream the benefit from the reduced diversion would diminish at points where return flows previously accumulated.

A trust water right for instream uses could be developed for the difference in diversion amounts between before- and after-project diversions. It could extend as far as the entire affected reach, depending on site-specific characteristics; the most benefit would be likely to occur directly below the point of diversion. The affected reach, in the case of changed timing and amount of diversion and return flows but no alteration of the amount of water consumed, would probably fall within the reach defined by the diversion point and the point at which return flows had reached the river.

Impairment to existing water rights, including instream flows, is not allowed under the law. Potentially affected third parties will need to be identified during the process. Any water users who rely on return flows prior to those flows reaching the river would also need to be identified.

In evaluating potential net water savings, questions to be answered may include:

1. What is the amount of reduced diversion which can be obtained through increased efficiency? (Refer to technical discussion in Appendix B for more detail on needed measurements.)

2. What is the reach within which identifiable return flows are back in the stream?

3. Are there other offstream diversions along the affected reach below the point of diversion? What is their priority date? Are these water rights normally satisfied with an adequate supply of water?

4. What is the extent of the original right, its historical use, and was there reasonable efficiency employed in the conveyance and use of water?

5. What is the net water savings available for transfer to a trust water right?

6. Is there a measurable reduction in consumption to enable the development of a trust water right for new consumptive use?

7. Are there ground water right holders who have relied on seepage waters who will be detrimentally affected by increased efficiency? What would those effects be?

Example 2

A farmer could be paid not to irrigate a crop so water would be left instream for fisheries; that water would not be consumed by the plants and thereby lost from the system and could become part of the trust water right program. There could conceivably be two sources of trust water, depending on the circumstances: the reduced diversions and augmentation of flows in the reach directly below the diversion point, and a downstream reach which was augmented by "salvaged" or non-consumed water which had not previously been available. In other words, the forgone consumptive use which would have occurred during irrigation would benefit the stream beyond the affected reach determined by historical return flows. The downstream benefit would extend from the original point of diversion downstream as far as the "saved water" could be measured or tracked. Credit could not be taken downstream for the portion of the original diversion that previously ended up as return flows. Only the eliminated consumptive use could be considered as a downstream benefit.

In evaluating water savings, questions to be answered could include:

1. What has been the historical amount of consumption by the crop? What has been the amount of diversion? Are there other significant, measurable causes of water loss from the system which have not been part of return flows?

2. How are the affected reaches defined? - related to return flows and extending downriver from that point?

3. Are there other water rights in the affected reaches? Downstream senior rights?

4. Are third party effects likely to occur? Are there concerns raised by parties other than those potentially directly impacted?

5. What is the relationship of the instantaneous flow historically used for this irrigation to any established instream flows (is there one set by regulation?) and to other offstream diversion patterns?

6. What are the currently unmet needs identified in the basin? Is there a regional or basin water allocation plan or critical water supply agreement which specifies priorities for allocation of trust water?

Municipal and Industrial Trust Water Rights

Trust water rights may also apply to municipal and industrial types of water use. The same concepts would be used to evaluate the water right for potentially transferable water. However, because the laws addressing various uses differ, the site-specific characteristics would be important. In evaluating the water savings, similar questions would need to be answered as those listed above in the two examples.

1. What has the historical use been under the water right? What is the water right description of the area served, the amount of water diverted; for what purpose has the water been used?

2. Are there other water rights or uses which might be affected through transfer to other uses or through increased efficiency?

3. Is there a regional water allocation plan, a basin plan, or a critical water supply agreement which describes currently unmet needs and indicates the priority of trust water right allocation?

## IV. ANALYSIS OF POTENTIAL FOR TRANSFER TO A TRUST WATER RIGHT

Each situation considered for a trust water right will be different and will require site-specific information. The following steps will generally be part of the process of evaluating water availability for a trust water right:

- calculation of gross water savings;

- calculation of net water savings;

- identification of the quantity of transferable water;

• identification of the quantities of water transferable to instream flow uses and to consumptive uses without impairment to other water rights;

• identification of the amount of water to be transferred to the state as a trust water right;

• development of a contractual agreement with the original water right holder and the issuance of a superseding certificate for the original water right holder and a certificate of water right for the trust water right amount, as appropriate.

A. Elements for Determination of Water Savings and Transferable Water

The following list indicates information which may be required to determine water availability for transfer as trust water. The pertinent questions will vary from case to case. These are questions typically asked by the Department when evaluating a request for transfer of a state-issued water right.

- □ Historical diversion or withdrawal amounts, instantaneous and acre-feet (annual and monthly);
- □ Season of use; months of historically established use;
- □ Electrical pumping records;
- □ Acreage or area of use; number of service connections;

- □ Quantity of water required to grow a particular crop during an irrigation season; records of historical consumptive use;
- □ Number of previously irrigated acres on which irrigation will not occur, if any; or, calculation of forgone consumptive use;
- □ Historical cropping patterns or diversion patterns;

- □ Nature of conservation proposed;
- □ Estimated gross water savings (reduced diversions);
- □ System of conveyance and use; record of repairs, maintenance;
- □ Conveyance and application efficiency;

- □ Path of diverted water, including return flows;
- □ Other uses made of return flows or other water escaping from the water system;
- □ Wetlands; if any are supported by water losses.

If a water right claim filed under Chapter 90.14 RCW is being evaluated, the following additional information will be required, at a minimum:

- Documentation of continuous historical exercise of the claimed right;
- Historical maps depicting the historical means of irrigation and the areas covered by the claimed right; and,
- Legal documentation, including any previous state or county records or court or administrative board decision, which addresses the historical nature and extent of the claimed right.

B. Evaluation of a Water Right

Evaluation of the water right (or claim) for the amount of water which can be transferred to the trust water right is the first and primary step, regardless of the type of transfer.

The Department of Ecology will require proof from the water right holder of a valid state water right or supported claim as part of the trust water rights process. Proof of a water right could include the certificate number or water right claim number, or legal description of the property, ownership of the land, and demonstration of continuous beneficial use.

C. Evaluation of Saved Water

When the Department of Ecology considers a water right for transfer into the trust water rights program, it must evaluate the right. Only that water which has been beneficially used in a reasonable manner may be considered for transfer; water in excess of reasonable use cannot be categorized as a trust water right, since it is not considered to be a beneficial use.

1. **Gross water savings**

Reduced diversions are the first step in calculating water savings through conservation; the difference between the historical diversions and the conservation-project diversions can be considered "gross water savings".

2. **Net water savings**

Net water savings at any point along the affected reach is the reduction in diversions minus return flows, minus any water needed to satisfy other rights existing at the time.

3. **Reasonably efficient practices**

The determination of how much of this water has historically been put to beneficial use through reasonably efficient practices is the next step in arriving at "net water savings".

a. If reasonably efficient practices have been in effect:

If a water user has employed "reasonably efficient practices", then the difference between pre- and post-project diversions, gross water savings, will also be considered the net water savings (minus water needed to satisfy other existing rights). That is, the diverted water has been beneficially used and is eligible for further consideration as a trust water right. This amount is determined through measurements at the point of diversion prior to the project and measurement of the diversions after implementing conservation measures. (Net water savings may be reduced as one moves downstream, due to return flows).

b. If reasonably efficient practices have not been employed:

If the Department determines that historically diverted amounts have been in excess of beneficial use, or not "reasonably efficient", the amount of water available for transfer will be reduced to an amount predicated on "reasonably efficient practices". This determination will depend on case by case analysis. The original reduction in the amount of diversion will be the gross water savings, but the amount considered beneficially used and potentially transferable to trust water will be predicated on net water savings, with consideration of reasonable efficiency.

Measurements of the amount of diversion occurring at the "reasonably efficient level" will be submitted to Ecology as part of the trust water rights evaluation. Once the diversion amount reflects reasonable efficiency, an analysis can be made of the potential for transfer to a trust water right.

The amount by which the diversion for beneficial use can be reduced through conservation and efficiency constitutes net water savings at the point of diversion (this quantity may change as you move downstream due to return flows). The net water savings to be transferred to the state as trust water can be negotiated with the water right holder; disposition to other uses from the trust will also be negotiated, as water is available for other uses without impairment of existing water rights.

Note: Methods of measuring net water savings and affected reach in the case of improved efficiency and continued irrigation are addressed in an appendix to this document. See Appendix B.

D. Transferable Quantity

No impairment of existing rights, including instream flows, is allowed under the trust water rights program. There are at least two cases to consider:

1) If water has been reasonably efficiently used under the original right and the user becomes more efficient in conveyance but continues the same amount of actual consumption (water lost from the system), then the transferable water is limited to the difference in the reduced diversions and is applicable only to the affected reach defined through return flows.

The trust water right would be measured at or just below the original point of diversion and would be estimated further down the reach. Site-specific factors and third party effects would be considered in each case.

2) The amount potentially transferable as a trust water right for new offstream consumptive (or nonconsumptive) uses would be predicated on the amount of consumption that could be shown to be forgone through the water conservation project.

The quantity of water transferable to the trust program is to be determined prior to expenditure of state funds for implementation, if state funding is involved. Once the amount is determined, then negotiation between the water right holder and the Department of Ecology can proceed regarding the amount to be transferred to other new uses. Again, transfer to new uses will be predicated on there being water available without impairment to existing rights and without increasing consumption.

The starting point for the negotiation process may be influenced by regional or basin water resource allocation plans or critical situation agreements, if a plan or agreement has identified and prioritized presently unmet needs regarding the allocation of conserved water. Other general purpose governments, including local and tribal governments, will be involved in the planning of allocations. The opinions and positions of these governments would be solicited during negotiations.

Note: Once water is transferred to a trust water right, the amount of the original diversion or withdrawal must be reduced accordingly from historical levels.

Salvaged water considered for any consumptive uses must be transferred to the state's trust water rights program prior to being reallocated. Although previously prohibited by law, the trust water statute enables the "spreading" (increased use) of salvaged water in limited situations. In most other cases, conserved water automatically reverts to the state under existing statutes.

E. Third Party Effects

Identification of potentially affected third parties will be made by those proposing the water conservation or trust water right project; the Department of Ecology will review and assist with water rights and claims information, wherever possible.

Potential third parties will be notified by mail; additional notification of the initiation of a water conservation project or trust water right will occur through newspapers, public meetings, and other means.

In general, the Department distinguishes between "effect" and "impairment" on an existing water right. An existing right might be affected through exercise of a trust water right in that the water level in a well might be lowered one foot; this would be considered an effect. If the water level were lowered significantly, requiring that the pump actually be lowered several feet deeper in the well, or if the quantity available were diminished, this might be considered an impairment.

Requirements of third parties if making claim of potential impairment:

- Documentation of historical water use, amount of irrigated acreage;
- Documentation of changes;
- Documentation of well or diversion construction and reliability of function;
- Pump capacity;
- Source of supply;
- Yearly fluctuations in water supply;
- Metering or any other available measurements.

Measurements would be taken before and after the project implementation to determine what effect, if any, the project was having and its extent. Other information might be required as appropriate.

Ecology may condition or deny transfers to the trust water right program to avoid injury to third parties or other public interests.

An analysis of the extent of recent development of new diversions or withdrawals in the area for domestic use may be appropriate.

If negative third party effects are possible, a plan of mitigation will be developed as part of the change in water right. Mitigation of third party effects may be part of project costs.

If possible impairment of water right holders is a significant problem, the trust water right may be modified or forgone.

Forms of mitigation could include, and are not limited to the following:

- Provision of water supply by different means, including ground water;
- Improvements in aquifer penetration as part of the cost of the project;
- Redesign of the proposed water conservation project to minimize impacts in a particular area.

## V. IMPLEMENTATION

### A. Contracting Procedures

#### 1. **Permanent Transfers**

Permanent water transfer agreements would have the following characteristics:

Transfers are intended to convey part or all of a water right to the state's trust water rights program;

Will provide for release of water by water right holder, entity, or individuals for use in the trust water rights program;

Determination of the transferable amount of water will follow the procedures outlined in the guidelines;

Contract will contain specific details of the payments, measurements, timing, schedule, water rights protection; and,

Negative third party effects will be addressed during negotiations of the amount of water to be transferred.

If state or federal funding assistance is involved, negotiated agreements will be required for specific transfer(s) prior to implementation or construction of a project which would increase the efficiency of the system. If federal funding is involved, consultations with potentially affected Indian tribes will be held.

For those projects which involve phased development of a water conservation project, a limiting agreement will be included to describe a time schedule for

transfer of increments of water to the trust water rights program as increased efficiency is implemented; no change in water rights shall occur until the water conservation program has been fully implemented. The limiting agreement is to serve as a binder on the trust water for phased projects from the beginning of the project until the original water right certificate is amended at the final stage of the project.

If water is proposed to be conveyed to the trust water rights program by an irrigation district, evidence of the district's authority to represent the water right holders shall be submitted to the department.

If the state contracts with a water right holder served by an irrigation district, the approval of the board of directors of that irrigation district shall be required.

2. **Temporary Transfers**

Temporary water transfer agreements would have the following characteristics:

A temporary water transfer is for a specified period of time;

The transfer will provide for release of water by water right holder, entity, or individuals for use in the trust water rights program; this could occur through the actions of two or more parties other than the state, with the transferred water becoming part of the trust water right program;

The determination of the transferable amount of water will follow the procedures outlined in the guidelines;

The contract will contain specific details of the payments, measurements, timing, schedule, cancellation clauses, and water rights protection for the original right holder regarding non-relinquishment.

If water is proposed to be conveyed to the trust water rights program by an irrigation district, evidence of the district's authority to represent the water right holders shall be submitted to the department.

If the state contracts with a water right holder served by an irrigation district, the approval of the board of directors of that irrigation district shall be required.

3. **Referendum 38**

Current Referendum 38 regulations allow up to 30% grant for water conservation projects. Ecology can make loans for up to 90% of project costs; project proponents generally try to qualify for the 30% grant, in conjunction with a 60% loan. Project proponents must come up with funds to cover 10% of project costs.

Contractual agreements for Referendum 38 funds could be conditioned, depending on how and if the current regulations were amended. The terms of the agreement negotiated between the state and the water right holder regarding transfer of net water savings to the trust water rights program could be included in the contract. The funds would not be disbursed until such terms were complied with. This is a voluntary program, in which the state and project proponent negotiate the amount of water to be transferred.

B. Procedures for Notifying Potentially Interested Parties

This will be accomplished by the Department of Ecology through distribution of information through mailing lists, the Water Resources Forum, public workshops, and other means. The notification program will function at both the basin or water resource inventory area level and statewide.

Implementation of the trust water rights program shall be consistent with state policy to achieve greater water use efficiency and to protect instream flows. Ecology will provide technical assistance to persons wanting to implement such transfers.

Ecology will work to compile lists of water right holders in drainages subject to trust water rights.

Interested parties will include those who are not directly involved in the water right transfer or potentially impacted as a third party, but who have concerns, including but not limited to, the following:

- Other water rights;
- Agricultural (businesses or farmers in the area of origin);
- The environment, including instream flows, wetlands and other ecosystems, water quality, and other interests affected by the environment;
- Community impacts (including; urban and rural population centers);

- Governmental concerns, including those of local or tribal governments;

- Fish and wildlife.

Ecology will make every effort to solicit the views of interested parties and governments on trust water right applications.

C. Sample Information Required for Filing a Trust Water Right Application

Information required from an applicant for a trust water right would include the following, at a minimum:

1) name, address, telephone number of the applicant;

2) the name appearing on the state water right certificate, decree or proof of appropriation;

3) the name of decree and certificate number, if applicable;

4) permit number and certificate number, if applicable;

5) source of water (from decree or certificate);

6) the existing and proposed points of diversion;

7) the authorized existing use or uses of water;

8) amount of water appropriated;

9) evidence that the water has been used over the past five years in accordance with the terms and conditions of the certificate; or, historical records indicating use over the past five years, at a minimum;

10) documentation that no relinquishment had occurred at any time since initiation of use and the amount of water actually used;

11) name of deeded owner of the land to which the water right is appurtenant;

12) if encumbrances exist against the property to which the existing right is appurtenant, the application shall be accompanied by a notarized statement from the holder of the encumbrance that there is no objection to the proposed change;

13) the proposed water conservation project, if applicable;

14) the proposed change in use, if applicable;

15) legal description of lands water is used on;

16) other information required to comply with these guidelines.

Filing fees ordinarily required by the Department of Ecology for changes in water use would be waived for trust water rights.

A notarized signature and certification of accuracy by the owner or responsible official will be required.

Ecology will review the application and supporting documentation for accuracy, completeness, and consistency with the records on the water right. Incomplete or inaccurate applications will be returned to the applicant for additional information and resubmittal.

D. Management and Administration Issues

Two factors determining the relationship of the trust water right to other rights on the stream are the length of the affected reach and the respective priority dates of the trust water right and other water rights. An assessment of other water rights in the affected reach would be made as part of creating the trust water right. Those rights along a stream which have junior priority dates may need evaluation in regard to their number, quantities of diversion, efficiency of practices, and historical adequacy of water supply.

For streams without instream flows set by regulation, the following steps would generally apply:

- Identification of all authorized diversions within the affected reach;
- Comparison of the priority dates to that of the trust water right (those with priority dates earlier than that of the trust water right would not be affected);
- Analysis of use patterns of downstream junior users vis-a-vis the trust water right's historical use patterns;
- Identification of unauthorized diversions along the stream, if any;

- Identification of ground water users in hydraulic continuity with the stream.

Metering or other measurements will be required as appropriate as part of the trust water right program, both to protect third parties and to protect the trust water right.

If the affected reach and the benefit from the trust water right extend downstream, then downstream junior rights will be restricted to allow the block of senior trust water to remain instream.

For streams with instream flows set by regulation, the same steps would be taken as listed above. Other considerations:

O Water rights issued earlier, than the trust water right would not be affected.

O Those water rights with priority dates later than the trust water right and earlier than the instream flow would be subject to the considerations listed above;

O Those water rights issued subject to the instream flows would be regulated when the stream flow falls below the minimum level with the trust water right added to the minimum flow level in the affected reach.

O Water-right-specific flows would need to be determined for the affected reach.

## VI. CRITERIA FOR DETERMINING THE QUANTITY TO BE CONVEYED TO THE STATE

These criteria are for consideration as appropriate to a given situation and are not in order of importance. The criteria indicate factors which will influence the allocation of trust water to new uses. All trust water is to be conveyed to the state's trust water rights program; subsequently, trust water rights may be conveyed for other beneficial uses, including consumptive uses, if salvaged water is available for transfer as a trust water right. Any conserved water which would have been subject to relinquishment for non-use must be transferred to the trust program in order to be allocated to a new use.

a) Source and proportion of funds provided by the project proponent, by the state, by federal, or other funds;

b) The proportion of funding provided by the state to increase efficiency to a reasonably efficient level;

c) Need to improve security of water supplies for existing uses;

d) Ability of user to meet needs in low water years given improvements to irrigation system;

e) For irrigation district water conservation projects, level of irrigation system capability to deliver adequate water supply prior to system improvements;

f) Possibility that the retention of saved water by the user would result in less or no need to develop additional water sources;

g) Degree of need for water for new or unmet needs (offstream and instream);

h) Guidance provided by regional/basin plan, critical situation solutions, court decisions, or other applicable decisions.

i) Instream flow augmentation shall be a priority for trust water right allocation in basins with identified stream flow deficiencies. The applicable regional/basin water allocation plan or critical situation agreement will be the guiding document regarding prioritization of currently unmet needs and the allocation of trust water.

Note: Any agency of the state may purchase, lease, or accept a gift of an existing water right to be dedicated to instream use in the form of a trust water right. The state's trust water rights program is to be managed by the Department of Ecology.

A voluntary transferee may designate up to 100% of a trust water right for instream use.

## VII. CRITERIA FOR PRIORITIZING WATER CONSERVATION PROJECTS FOR FUNDING

Criteria for prioritizing water conservation projects (as applicable, not listed in order, and generally funded by state or federal monies)

**Plans or Agreements**

a) Existence of a water conservation plan (per Referendum 38 guidelines or interim guidelines for public water supply)

b) Policies or statements included in regional pilot plans or agreements reached in designated WRIAs containing critical water supply areas and ability of the proposed trust water right to meet the stated objectives;

c) Extent of support among local, tribal, state governments and other interests;

d) Consistency with regional fish or wildlife plans developed by the state, tribal, or federal governments, including but not limited to: Northwest Power Planning Council Fish and Wildlife Program or other pertinent programs;

e) Consistency with other resource management programs, (for example, conservation or habitat restoration programs, or scenic river programs).

f) Degree of need to restore instream flows as identified in plans listed above or in plans developed through multi-interest involvement and consensus.

**Data**

a) Availability of data to determine extent of valid water right, historical water use, net water savings, amount of water available for trust water right;

b) Availability of data and information on potential third party effects; the number of water users in the affected reach, the relative seniority of their water rights;

c) Data to determine affected reach, point of flow returns, etc.

d) Ability to develop enforceable and practical enforcement program for trust water right (data-related and implementation- related);

e) Certainty of water right.

**Benefits**

a) Length of time required for realization of water in the trust water rights program;

b) Amount of benefit potentially available to the state; e.g. the amount of water that could be dedicated to instream flows or other public needs;

c) The number of intervening users who could potentially be affected as third parties;

d) Length of stream for which trust water right would be in effect and beneficial;

e) Benefits for water quantity and quality, temperature, or other factors;

f) Significance of improvement in instream values, including flows for fisheries, recreation, aesthetics, water quality, navigation, scenery, wildlife habitat, and other related values;

g) Presence or threat of listing of anadromous fish species as threatened or endangered and ability of the potential trust water right to assist in maintenance or recovery;

h) Temporary or permanent nature of transfer, if a later change in purpose of use could impact dependent resources;

i) Provides for the highly efficient use of water resources;

j) Consistency with the instream flow policy adopted by the Water Resources Forum.

**Varieties of Benefits**

a) Proposed project can meet needs for both instream and offstream uses;

b) Contribution toward meeting state and local growth management objectives. Consistency with growth management plans;

c) Ability of various jurisdictions to protect trust water rights once implemented: local land use controls, Department of Ecology enforcement programs, ditchwalkers or stream patrolmen;

d) Contribution to resolution of water use conflicts, legal actions, and other disputes.

**Funding**

a) Ability of proponent to secure matching funding;

b) Availability of state funding to be augmented by federal or other funds;

c) Leveraging more water efficiency through combined funds from several sources.

## VIII. DESCRIPTION OF POTENTIAL PUBLIC BENEFITS AFFECTING STATE FUNDING

Description of potential public benefits that will affect consideration for state financial assistance in RCW 910.42.030

a) Resolution of weak fish stock problems, avoidance of potential listings for threatened or endangered species;

b) Restoration of stream flows;

c) Mitigation of past losses of fisheries or other instream flow values.

d) Implementation of regional water plans and critical water supply remedies;

e) Increased certainty of instream flows for fish, wildlife, recreation, aesthetic, water quality, navigation, and other environmental values, and stock water.

f) Amelioration of water quality problems; improvements in water quantity;

g) Improved security of water supply (to a reasonable level) for existing domestic water supply purposes, municipal, irrigation, power, or industrial uses;

h) Meeting emerging offstream water needs through conservation as opposed to new source development;

i) Meeting state and local growth management objectives;

j) Reduced friction among state, tribal, local governments and other interests;

k) Resolution of court proceedings or fulfillment of court-mandated obligations.

## IX. CRITERIA FOR DEFINING WATER RESOURCE INVENTORY AREAS (WRIAs) CONTAINING CRITICAL WATER SUPPLY PROBLEMS

In defining those Water Resource Inventory Areas in which trust water rights may be implemented under Chapter 90.42 RCW, some of the factors developed by the Water Resources Forum to define critical situations could apply:

- well interference
- hydraulic continuity
- international and state jurisdictional disputes over water withdrawal and instream flow
- exemption from instream flow regulation for overriding considerations of the public interest
- non-permitted development
- seawater intrusion
- stream flow levels which are inadequate for fish and wildlife or other instream purposes

Other factors which could be considered:

- listing or potential listing of a species as threatened or endangered or identification of weak stocks resulting in part from inadequate stream flows;

- a recommendation from the Water Resources Forum regarding definition of a problem and its potential solution;

- the availability of water from senior appropriators and willingness to transfer to trust water rights program;

- the disparity between the level of protection actually afforded by an instream flow regulation and the desired level of flows;

- the variety of types of trust water rights which are likely or possible to be obtained as the program is implemented; a broad range of potential applications is an objective of program implementation and is specifically mentioned in the statute.

## X. CRITERIA FOR ASSIGNMENT OF USES OUTSIDE DESIGNATED AREAS

Criteria for the assignment of uses of trust water rights acquired in areas of the state not addressed in a regional water resources plan or critical area agreement. (Language of RCW 90.42.050(6))

The Department of Ecology assumes that trust water rights can be acquired only in areas delineated according to legislation (RCW 90.42.010). However, existing rights can use the transfer process outlined in RCW 90.03.380 to apply for a change in purpose or place of use. (See Glossary under "Change of Water Right").

Current state law allows changes in place, point of diversion or withdrawal, or purpose of use for existing water rights, under certain limitations. A proposed change cannot detrimentally affect any existing water right, including junior rights and instream flows. Transfers of consumptive water rights from one property to another may occur if the amount of consumption and acreage irrigated is not increased. Under this existing law, "salvaged" water may not be transferred. Transfers to instream purposes from offstream uses also appear to be allowable under existing law.

Trust water is the mechanism under which conserved and salvaged water may be transferred to other uses; trust water rights are geographically limited to those areas designated either in the legislation or by Ecology.

# GLOSSARY

These terms have been defined for application to this trust water rights program document. Where terms are found in statute the citation is included. In other cases, terms have been defined through case law, rule, or experience. Each of these terms was discussed at length and developed in coordination with the Trust Water Rights Advisory Committee.

## Affected reach

The reach extending from the point of diversion downstream in which flows, distribution, and historical use patterns of water would be altered through creation of a trust water right.

For changes in amount of consumption, where salvaged water occurs: For forgone water use, (or wholly or partially reduced levels of consumption), the affected reach would extend from the diversion point downstream as far as measurable or trackable.

The reach below the point of diversion, plus the downstream reaches in which the forgone consumption (water previously lost from the system through evaporation, plant use, drainage to an unusable aquifer, or other means, and which does not constitute part of return flows) can be tracked or measured (for instream flow trust water rights).

For changes in return flows: The reach extending from the point of diversion downstream to the point where all detectable accretions to the reach occur which can be attributed to return flows (where they exist), resulting from the conveyance, distribution, and use of the diverted water.

At some point downstream from the diversion point, most of the return flows will have re-entered the stream. In many cases, this point will be identifiable by surface return flows and/or by geological features which indicate that ground water is feeding the stream flows.

## Beneficial use

The code defines beneficial use in terms of the purposes of use rather than efficiency of use.

RCW 90.54.020(1) - Uses of water for domestic, stock watering, industrial, commercial, agricultural, irrigation, hydroelectric power production, mining, fish and wildlife maintenance and enhancement, recreational, and thermal power production purposes, and

preservation of environmental and aesthetic values, and all other uses compatible with the enjoyment of the public waters of the state, are declared to be beneficial.

RCW 90.54.020(3)(a) - ...preservation of wildlife, fish, scenic, aesthetic and other environmental values, and navigational values...

RCW 90.22.010- ...for the purposes of protecting fish, game, birds or other wildlife resources, or recreational or aesthetic values...water quality...

Definition: Any use of water utilizing reasonably efficient practices to accomplish a legitimate objective including both public and private purposes. Beneficial use includes conveyance and application losses that are consistent with reasonably efficient practices.

Change of water right

Means any change in the purpose, place or time of use, a change in the point of diversion or withdrawal, a change from a defined point of diversion or withdrawal to alternate or supplemental points of diversion or withdrawal, or a change to use within the stream, a change from a defined place of storage to an alternate place of storage, any combination of such changes, or any "transfer of water right". RCW 90.03.380

Critical water supply problem areas

The department may designate up to four water resource inventory areas (WRIAs) west of the Cascades and up to four WRIAs east of the Cascades. The areas designated shall contain critical water supply problems . ...The department shall seek advice from agencies, tribes, local governments, water right holders, and interested parties before identifying such WRIAs. RCW 90.42.010

Deer percolation

That portion of the diverted water applied to the crop which escapes below the root zone.

Evaporation

The loss of water from ponds, canals, or other surfaces into the air as vapor.

Evapotranspiration

The loss of water from the soil by evaporation from the surface and by transpiration from plants growing thereon.

Federal reserved water rights

Federal reserved rights - Federal case law has established that an implied water right is associated with federal reservations of land made by Congress or by executive order. The water rights are limited to the amount necessary to achieve the primary purposes of the reservation. Federal reserved rights may be affirmed and quantified in state court general adjudications of water rights. Reserved rights have a priority date as of the date of the reservation. Some federal reservations have primary purposes relating to fish, wildlife, recreation, scenic and aesthetic values that imply the existence of instream flow rights.

Tribal reserved rights - Like federal reservations, Indian reservations have associated with them reserved water rights for the primary purposes of the reservation. Numerous legal cases over time have addressed the nature of these rights. The case of Arizona versus California established the "practically irrigable acreage" standard. Most tribes have needs other than irrigation water; water rights are frequently claimed for domestic, industrial, commercial and instream purposes (on-reservation). Some claims have been affirmed with priority dates of "time immemorial"; others have been established with priority dates being the date of establishment of the reservation.

Indian treaties in the Northwest reserved tribal access to fish and wildlife resources both on and off reservations. Court decisions have affirmed tribes' rights to harvest up to one-half the harvestable salmon and steelhead in streams and areas historically used by tribes. Tribes also have asserted rights to protection of the habitats used by the fish to which they have reserved rights, including wetlands, watersheds, and other environmental elements relating to fisheries habitat and production. This could include rights for instream flows necessary to sustain the reserved fisheries. A long series of court decisions on the habitat protection issue has been inconclusive. Treaty fishing rights have been determined, in some cases, to date from time immemorial.

Forgone use

The voluntary refraining from use of all or part of a water right. Under the trust water right program, non-use of a water right in this manner would not be cause for relinquishment. Documentation of historical use would be necessary.

Gross water savings

The reduction in diversions from the amount historically taken to the amount needed after a water conservation project is the gross water savings. The historical use will be evaluated for reasonable efficient practices, on a site-specific basis, and a determination made of the amount of water which is transferable to a trust water right.

Impairment

A change that adversely impacts the physical availability of water for beneficial use by a water right holder so as to prevent them making economical use of their water right.

Instream uses

Statutorily listed uses: maintenance and enhancement of fish and wildlife habitat; recreational purposes; environmental values, including but not limited to, scenic, aesthetic, and other values; navigation; water quality; and, all other uses compatible with the enjoyment of the public waters of the state. RCW 90.54.020, RCW 90.22.010

Riparian stock drinking is listed in RCW 90.22.040.

Lease

A contract for nonpermanent conveyance of a trust water right which includes a specific lease hold period.

Limiting Agreement

A commitment by a water user to convey to the trust water rights program the future transferable water savings from a phased conservation program. The agreement would also commit the water user to limit future diversions in accordance with the quantity of water conveyed to the trust water rights program.

Mitigation of impairment

Changes in source, delivery methods, providing replacement water, or other appropriate water management changes designed to eliminate or compensate for a reduction or elimination of a source of water used by an existing water right.

Mitigation

Defined in SEPA regulations WAC 197-11-768 as:

1) Avoiding the impact altogether by not taking a certain action or parts of an action;
2) . Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or be taking affirmative steps to avoid or reduce impacts;
3) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
4) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;
5) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or
6) Monitoring the impact and taking appropriate corrective measures.

Net water savings

There will generally be two types of activities that can result in the transfer of water under the trust water program: (1) a water user becomes more efficient in the conveyance and application of the water, or (2) a water user decides to forgo the use of all or a portion of the water on a temporary or permanent basis.

In either case, the total quantity of water diverted will be reduced. However, the quantity which may be available for use by others has to be decreased by an amount to reflect the return flows, if any, which are currently returning to the stream and which downstream surface water users or down-gradient ground water pumpers, both instream and offstream, may be relying upon for all or a part of their water supply.

This difference is termed net water savings and is defined in RCW 90.42.020(2) as: "The amount of water that is determined to be conserved and usable within a specified stream reach or reaches for other purposes without impairment or detriment to water rights existing at the time that a water conservation project is undertaken, reducing the ability to deliver water, or reducing the supply of water that otherwise would have been available to other existing water uses."

An additional consideration is the historical amount of beneficial use and what, if any, part of the water being diverted would be evaluated as not reasonably efficient. Gross water savings is the total reduction in diversions. The amount of water considered part of the historical water right can be considered for transfer.

Option

A long-term contract between the state and the water right holder for periodic short term leasing of an existing water right triggered by an actual or expected water shortage for use as a trust water right.

Pilot planning areas

The geographic area designated under RCW 90.54.045(2), specifically the Dungeness and Quilcene basins (portions of WRIAs 17 and 18) and the Methow basin (WRIA 48).

Priority date

A state-issued water right acquired by appropriation relates back to the date of filing of the original application for appropriation with the Department of Ecology.

Reasonably efficient practices

Reasonably efficient practices, as currently viewed by the Department of Ecology, are a reflection of the efficiency of each water system, on a case by case basis, given the standard practices at the time the system was developed and the improvements and maintenance which would have been expected to occur over time. The interim guidelines for water conservation apply to municipal and industrial water right holders, also.

For the purposes of these guidelines, reasonably efficient practices are defined as those practices including but not limited to methods of conveyance, use, and disposal of water which are reasonable and appropriate under the circumstances to bring about water use efficiency as determined by an area-specific application of criteria identified by Department of Ecology, which may include, among others:

a) Customary practices in the vicinity or industry: the standard practice at the time the project was developed; the maintenance and repairs ordinarily expected on a system;
b) Appropriateness of any facilities at the time of installation;
c) Cost of improvements and impacts of the costs of upgrading facilities on the continued use of water by an appropriator;
d) Changes in water use practices and technology;
e) Impact of alternative water use practices on other water uses and the environment; and,
f) Need of other beneficial uses for water from the same source.

A water right includes conveyance and application losses that are consistent with reasonably efficient practices.

> RCW 90.44.110 - No public ground waters that have been withdrawn shall be wasted without economical beneficial use.
>
> RCW 90.44.120 - The unauthorized use...or the wilful and negligent waste of ground water. . .shall be a misdemeanor.
>
> RCW 90.03.005 - ....based on the tenet of water law which precludes wasteful practices in the exercise of rights to the use of waters, the department of ecology shall reduce these practices to the maximum extent practicable, taking into account sound principles of water management, the benefits and costs of improved water use efficiency, and the most effective use of public and private funds...

Determination of reasonably efficient practices can be made using the above criteria on a case by case basis. Current litigation may further define the applicability of these criteria.

Relinquishment

Any person entitled to divert or withdraw waters of the state through any appropriation, by custom, or by general adjudication, who abandons the same, or who voluntarily fails, without sufficient cause, to beneficially use all or any part of said right to divert or withdraw for any period of five successive years shall relinquish such right or portion thereof, and said right or portion thereof shall revert to the state and the waters affected by said right shall become available for appropriation. RCW 90.14.160

Return flows

That portion of diverted water which, through seepage/spills, deep percolation, or discharge, returns to the source.

Salvaged water

Reduction of irretrievable water losses from a water system. Salvaged water becomes available for beneficial uses under the trust water rights program. Water previously lost from the system through consumption, percolation to an inaccessible aquifer, or out of basin transfer which can be demonstrated to be saved through some change in practices.

Seepage/spills

That portion of the diverted water which is lost in transit to the point of use (not including evapotranspiration), or occurs as operational spills, or as run-off (surface or shallow ground water) from application.

Superseding Certificate

For a conveyance to the trust water rights program, the document issued that reflects the changes in purpose or place of use, or point of diversion or withdrawal, the quantity, and the reaches of use. RCW 90.42.040(2)

> RCW 90.42.040(2) - A superseding certificate shall be issued that specifies the amount of water the water right holder would continue to be entitled to as a result of the water conservation project.

Temporary change

Means any change in a water right, including any rotation of use, which by its terms, is intended to be made at determined regular intervals or for a specified time period.

RCW 90.03.390 and 43.83B.344

Transfer of water right

Means any change in ownership of a water right, whether or not such change is made with a transfer of the land or place of use to which the right is appurtenant, and any change in the place of use. RCW 90.03.380

Trust water right

Any water right acquired by the state under Chapter 90.42 RCW. RCW 90.42.020(3)

Trust water right priority date

A trust water right retains the same priority date as the water right from which it originated, but as between them the trust right shall be deemed to be inferior in priority to the original right unless otherwise specified by an agreement between the state and the party holding the original right.

RCW 90.42.040(3)

Water bank

An institutional arrangement through the Department of Ecology for brokering the purchase and sale of water, usually on a temporary basis. Water right holders not wishing to use all or a part of their water right in a given year "deposit" water in the bank. Persons or entities needing water that year may purchase the right to use that water from the bank.

Water conservation project

Any project or program that achieves physical or operational improvements that provide for increased water use efficiency in existing systems of diversion, conveyance, application, or use of water under a water right.

Water right

A proprietary interest in water for a specified use or uses, in specific quantities, and from a specific source. State law generally provides strong protection to existing rights with respect to any new uses or changes to existing uses regardless of relative priority date. Instream flows adopted by rule are defined as water rights by state law. Water rights and claims are also recognized which exist under other jurisdictions and authorities: federal projects and tribal water rights and claims, for example.

Water right certificate (state-issued)

The final stage in establishment of a water right under state law following the filing of an application, receipt of a development permit, and putting water to beneficial use. The certificate states the quantitative and locational parameters of the water right. Certificates are also issued at the conclusion of a water rights adjudication. RCW 90.03.330

Water right certificate (for trust water rights)

The department shall issue a water right certificate in the name of the state for each permanent trust water right conveyed to the state indicating the reach or reaches of the stream, the quantity, and the use or uses to which it may be applied. RCW 90.42.040(2)

Water right claim (state)

A statement of the existence of a water right generally vesting prior to 1917 for surface water and 1945 for ground water. The beneficial use of water must have been initiated prior to 1917 for surface water and 1945 for ground water; evidence must be shown that there has been no relinquishment (cessation of use for five or more years, per RCW 90.14.140). A supported water right claim includes sufficient evidence to satisfy the Department of Ecology that a valid water right would be confirmed should the claim be adjudicated. Necessary information to enable Ecology to make a determination includes, but is not limited to:

a) Documentation of continuous historical exercise of the claimed right;
b) Historical maps depicting the historical means of irrigation and the areas covered by the claimed right;
c) Legal documentation, including any previous state or county records or court or administrative board decision, which addresses the historical nature and extent of the claimed right;
d) "Old timer" testimony which addresses the historical nature and extent of the claimed right.

Cited from WAC 173-166-030(9).

Water right permit (state)

An approval by the department allowing construction of a water system and applying water to a beneficial use in response to an application to appropriate public waters.

# APPENDIX A

# LIST OF ADVISORY COMMITTEE MEMBERS

Trust Water Right Committee Members

The following list indicates each committee member and their affiliation.

Mr. Ben George
Washington Cattlemen's Association

Ms. Polly Dyer
The Mountaineers

Mr. Mike Williams
WA Environmental Council

Mr. Dale Bambrick
Yakima Indian Nation

Mr. Doug Dobyns
Nooksack Tribal Council

Mr. Bill Hartzell
Puget Power

Mr. Ron van Gundy
Roza Irrigation District

Mr. Don Stuart
Salmon for Washington

Mr. Chuck Hale
Washington Trollers Association

Mr. Paul Ayan
Northwest Rivers Council

Mr. Stu Trefry
Washington Department of Agriculture

Mr. Bill Koss
Washington Department of Fisheries

Mr. Larry Vinsonhaler
Bureau of Reclamation - Pacific Northwest Region

Ms. Lorraine Bodi
American Rivers

Andre L'Heureux
Northwest Power Planning Council

Mr. Lloyd Warren
City of Bellevue - Water And Sewer Utilities

Richard Erickson
East Columbia Basin Irrigation District

Walt Larrick
Roza Irrigation District

# APPENDIX B

# TECHNICAL PROCESS

# FOR

# ESTIMATING NET WATER SAVINGS

September 10, 1992

# Trust Water Guidelines
# Technical Process
# for
# Estimating Net Water Savings

This process is proposed as a method to quantify the amount of net water savings which may be transferable to a trust water right as result of conservation or foregone water use. The affected reach associated with the saved water will depend on the source of saved water Saved water which is recovered from losses that return to the river will mainly benefit a reach just below the diversion point. Saved water which is recovered from losses which do not return to the stream will benefit a reach extending below the return flows. The amount of saved water which may be considered net saved water and transferable will also depend on efficiency of the irrigation system operation before involvement with the trust water rights program.

The focus of this technical process is to document the level of efficiency, amount of losses, and quantity of return flows associated with an irrigation system. Figure 1 shows the flow measurement points required to estimate the current level of efficiency and amount of lost diversion water which returns to the stream. The overall level of efficiency will depend on the amount of water lost during conveyance and application. Conveyance efficiency is the amount of water delivered to the farm or field over the amount diverted from the water source. Application efficiency is the amount of water required for irrigation over the amount delivered to the farm or field. Irrigation losses include evaporation, evapotranspiration, seepage/spill, and deep percolation; these terms are defined in the glossary. An outline to determine net water savings is presented below.

I. Determine the location of the following flow measurement points (see figure 1):

1. Identify a point in the stream immediately upstream of the system's point of diversion (Point A),
2. Identify system's point of diversion from the stream (Point B),
3. Identify system's delivery points to farm or field (Point C),
4. Identify system's operational spills (Point D),
5. Identify third party diversion points from the stream (Point E),
6. Identify a point in the stream below where the majority of the system's return flows accrue to the stream (Point F),
7. Identify the number of acres irrigated from each farm or field delivery point (Point G).

II. Quantify monthly average flow values at each point described above, see Table I for duration and method.

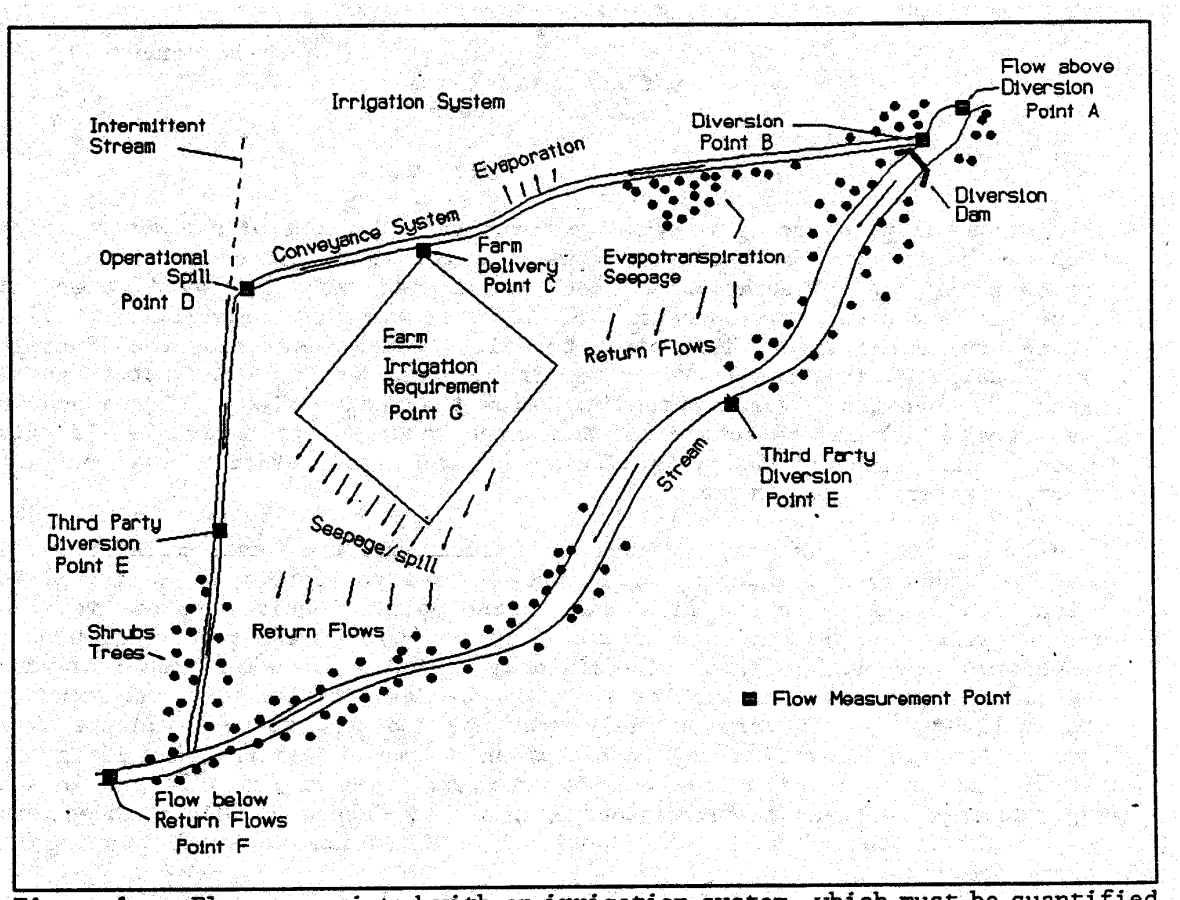


**Figure 1** **Flows associated with an irrigation system, which must be quantified to determine the amount of water transferable as a trust water right.**

Table I Duration and method of measurement required for each flow point in the trust water right guidelines.

| Point | Duration | Method |
|---|---|---|
| A Stream Flow above Diversion | 1 Year – Pre & Post Project | Measure |
| B Diversion | Irrigation Season | Measure |
| C Farm Delivery | Irrigation Season | Measure |
| D Operational Spill | Irrigation Season | Measure |
| E Third Party Diversions | Irrigation Season | Estimate or Measure |
| F Stream Flow below Return Flows | 1 Year – Pre & Post Project | Measure |
| G Irrigation Requirement | Irrigation Season | Estimate* |

* Based on Irrigation Requirements for Washington-Estimates and Methodology, James, L.G., J.M. Erpenbeck, D.L. Bassett, J.E.Middleton. Coop. Ext. WSU, Pullman, EB1513.

III. Estimate Losses and Efficiency.

A. Irrigation system losses will be estimated by the following:

1. Conveyance Losses = Diversion (Point B) = Delivery (Point C),
2. Application Losses = Delivery (Point C) – Irrigation Requirement (Point G),
3. Total Losses = Conveyance Losses + Application Losses.

B. Irrigation system efficiency will be calculated by the following:

1. Conveyance Efficiency = Delivery (Point Cc) / Diversion (Point B) x 100,
2. Application Efficiency = Irrigation Requirement (Point G) / Delivery (Point C ) x 100,
3. Total Efficiency = Conveyance efficiency x Application Efficiency / 100.

IV. Determination of Return Flows

A. A mass water balance on the stream is to be applied between the stream flow measurement point above the diversion (Point A) and the stream flow measurement point below where the returns occur (Point F). (note: As the timing of return flows will vary from place to place, the time frame of this approach will need to be assessed for each case.) As an example, estimate return flows associated with the irrigation system using the following equation:

Return flows = [Point B + Point E + Point F – Point A] x Point B / (Point B + Point E).

B. Estimate the amount of water which is lost from the irrigation system that returns to the stream by the following:

Percent Losses which Return = Return Flows / Total Losses x 100

V. Evaluate the Irrigation system for Reasonable Efficiency

A. A determination will be made by Ecology as to whether the irrigation system was reasonably efficient before any negotiation for transfer of the water to the trust. An estimate of reasonable diversion would be based on the reasonable efficiency value determined by Ecology as follows:

Reasonable Diversion = Irrigation Requirement / Reasonable Efficiency / 100

VI. Estimate Water Savings Associated with Improvements in Irrigation Efficiency or Forgone Water Use

A. Conservation Project

1. Estimating Gross Water Savings

Estimate system efficiencies that would occur with a proposed conservation project. Use the following equation to estimate the diversion required after the project is implemented:

Project Diversion = Irrigation Requirement / Project Efficiency / 100.

Gross Water Savings = Reasonable Diversion – Project Diversion

2. Estimating Salvaged Water

The amount of lost irrigation water which was not returning to the stream is salvaged water and may be estimated as follows:

Salvaged Water = Gross Water Savings x (1 – Percent Losses which Return / 100).

B. Forgone Water Use

If land is taken out of irrigation, estimate the forgone water use. This estimate will be based on the irrigation requirement of the crops taken out of production and the reduction of irrigation losses associated with this reduced crop land. The value of irrigation losses will be adjusted for reasonable efficiency loss if needed. The following equation can be used to estimate gross water savings:

Gross Water Savings = Irrigation Requirement + Reduced Losses

The amount of salvaged water will be based on the irrigation requirement and that portion of the reduced loss which did not return to the stream.

Salvage Water = Irrigation Requirement + [Reduced losses x (1-Percent Losses which Return / 100)]

VII. Net water savings will be the amount of gross water savings or salvaged water which can be tracked in the affected reach.

VIII. A post project evaluation of return flows will be performed following the procedure of part IV to determine actual amount of water which returns after project implementation.

Example Calculations

The following two examples illustrate the use of the technical process to determine net water savings. These examples use the flows for one month during the irrigation season as shown in Figure 2 and Table II.

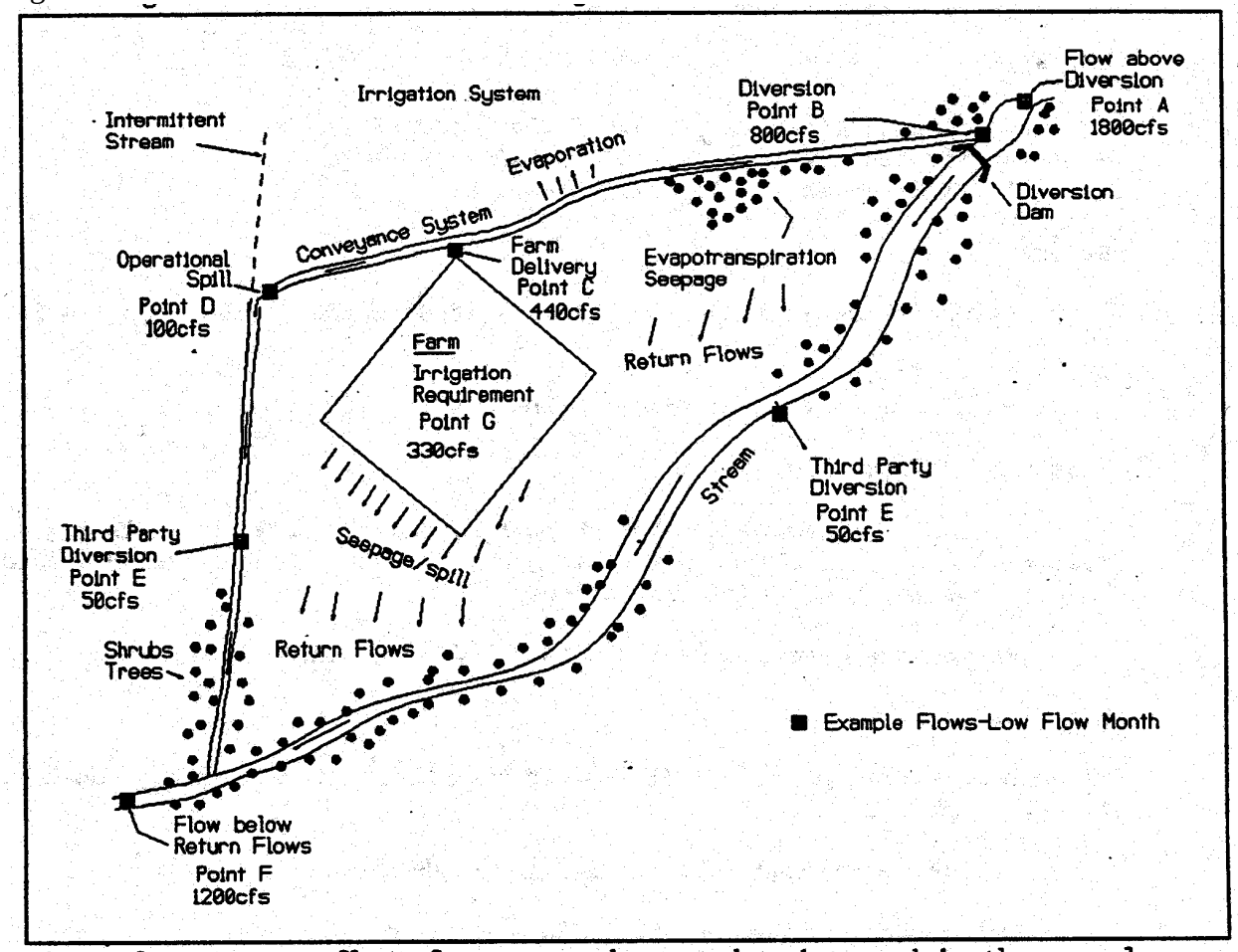


**Figure 2 Average flows for one month at each point used in the examples.**

Table II Flows at each point used in the examples.

| Point | Flow (cfs) |
|---|---|
| A Stream Flow above Diversion | 1800 |
| B Diversion | 800 |
| C Farm Delivery | 440 |
| D Operational Spill | 100 |
| E Third Party Diversions | 100 |
| F Stream Flow below Return Flows | 1200 |
| G Irrigation Requirement | 330 |

Example 1

Losses

Conveyance Losses = 800 - 440 = 360 cfs
Application Losses = 440 - 330 = 110 cfs
Total Losses = 360 + 110 = 470 cfs

Efficiency

Conveyance Efficiency = 440 / 800 x 100 – 55%
Application Efficiency = 330 / 440 x 100 = 75%
Total Efficiency = 55 * 75 / 100 = 41%

Return Flows

Return flows = [800 + 100 + 1200 – 1800] x 800 / (800 + 100) = 267 cfs

Percent losses which return = 267 / 470 x 100 = 57%

Reasonable Efficiency

Assume that Ecology as determined through negotiation that for this region that reasonable efficiency should be 50%. Then the current system should have a reasonable diversion as follows:

Reasonable diversion = 330 x 50 / 100 = 660 cfs

Conservation

Through conservation work it is assumed that the total efficiency could be improved to 73%.

Project Diversion = 330 x 73 / 100 = 450 cfs

Gross water savings = 660 – 450 = 210 cfs

Salvage Water = 210 x ( 1 – 57 / 100 ) = 90 cfs

Net Water Savings

The affected reach just below the diversion would receive the amount of 210 cfs that could be tracked.

The affected reach extending below the returns would receive the amount of 90 cfs that could be tracked.

Example 2

Losses

Conveyance Losses = 800 – 440 = 360 cfs
Application Losses = 440 – 330 = 110 cfs
Total Losses = 360 + 110 = 470 cfs

Efficiency

Conveyance Efficiency = 440 / 800 x 100 = 55%
Application Efficiency = 330 / 440 x 100 = 75%
Total Efficiency = 55 * 75 / 100 = 41%

Return Flows

Return flows = [800 + 100 + 1200 – 1800] x 800 / (800 + 100) = 267 cfs

Percent losses which return = 267 / 470 x 100 = 57%

Reasonable Efficiency

Assume that Ecology as determined through negotiation that for this region that reasonable efficiency should be 50%. Then the current system should have a reasonable diversion as follows:

Reasonable diversion = 330 x 50 / 100 = 660 cfs

Forgone Water Use

It is assumed that half of the land is taken out of production, thus freeing up half of the water.

half of irrigation requirement = 165 cfs
half of reasonable losses = 165 cfs

Gross water savings = 165 + 165 = 330 cfs

Salvaged water = 165 + 165 (1 = 57 / 100) = 236 cfs

Net Water Savings

The affected reach just below the diversion would receive the amount of 330 cfs that could be tracked.

The affected reach extending below the returns would receive the amount of 236 cfs that could be tracked.

# APPENDIX C

# CHAPTER 90.42 RCW

# Chapter 90.42 RCW
# WATER RESOURCE MANAGEMENT

Sections



**RCW 90.42.005 Policy—Findings.** (1) It is the policy of the state of Washington to recognize and preserve water rights in accordance with RCW 90.03.010.

(2) The legislature finds that:

(a) The state of Washington is faced with a shortage of water with which to meet existing and future needs, particularly during the summer and fall months and in dry years when the demand is greatest;

(b) Consistent with RCW 90.54.180, conservation and water use efficiency programs, including storage, should be the preferred methods of addressing water uses because they can relieve current critical water situations, provide for presently unmet needs, and assist in meeting future water needs. Presently unmet needs or current needs includes the water required to increase the frequency of occurrence of base or minimum flow levels in streams of the state, the water necessary to satisfy existing water rights, or the water necessary to provide full supplies to existing water systems with current supply deficiencies; and

(c) The interests of the state will be served by developing programs and regional water resource plans, in cooperation with local governments, federally recognized tribal governments, appropriate federal agencies, private citizens, and the various water users and water interests in the state, that increase the overall ability to manage the state's waters in order to resolve conflicts and to better satisfy both present and future needs for water. [1991 c 347 § 1.]

**Purposes—1991 c 347:** "The purposes of this act are to:

(1) Improve the ability of the state to work with the United States, local governments, federally recognized tribal governments, water right holders, water users, and various water interests in water conservation and water use efficiency programs designed to satisfy existing rights, presently unmet needs, and future needs, both instream and out-of-stream;

(2) Establish new incentives, enhance existing incentives, and remove disincentives for efficient water use;

(3) Establish improved means to disseminate information to the public and provide technical assistance regarding ways to improve the efficiency of water use;

(4) Create a trust water rights mechanism for the acquisition of water rights on a voluntary basis to be used to meet presently unmet needs and future needs;

(5) Prohibit the sale of nonconforming plumbing fixtures and require the marking and labeling of fixtures meeting state standards;

(6) Reduce tax disincentives to water conservation, reuse, and improved water use efficiency; and

(7) Add achievement of water conservation as a factor to be considered by water supply utilities in setting water rates." [1991 c 347 § 2.]

**RCW 90.42.010 Purpose—Water resource inventory areas—Written evaluation and recommendations.** (1) The legislature finds that a need exists to develop and test a means to facilitate the voluntary transfer of water and water rights, including conserved water, to provide water for presently unmet needs and emerging needs. Further, the legislature finds that water conservation activities have the potential of affecting the quantity of return flow waters to which existing water right holders have a right to and rely upon. It is the intent of the legislature that persons holding rights to water, including return flows, not be adversely affected in the implementation of the provisions of this chapter.

The purpose of this chapter is to provide the mechanism for accomplishing this in a manner that will not impair existing rights to water and to test the mechanism in two pilot planning areas designated pursuant to RCW 90.54.045(2) and in the water resource inventory areas designated under subsection (2) of this section.

(2) The department may designate up to four water resource inventory areas west of the crest of the Cascade mountains and up to four water resource inventory areas east of the crest of the Cascade mountains, as identified pursuant to chapter 90.54 RCW. The areas designated shall contain critical water supply problems and shall provide an opportunity to test and evaluate a variety of applications of RCW 90.42.010 through 90.42.090, including application to municipal, industrial, and agricultural use. The department shall seek advice from appropriate state agencies, Indian tribes, local governments, representatives of water right holders, and interested parties before identifying such water resource inventory areas.

(3) The department shall provide to the appropriate legislative committees by December 31, 1993, a written evaluation of the implementation of RCW 90.42.010 through 90.42.090 and recommendations for future application. [1991 c 347 § 5.]

**Purposes—1991 c 347:** See note following RCW 90.42.005.

**RCW 90.42.020 Definitions.** Unless the context clearly requires otherwise, the definitions in this section apply throughout this chapter.

(1) "Department" means the department of ecology.

(2) "Net water savings" means the amount of water that is determined to be conserved and usable within a specified stream reach or reaches for other purposes without impairment or detriment to water rights existing at the time that a water conservation project is undertaken, reducing the ability to deliver water, or reducing the supply of water that otherwise would have been available to other existing water uses.

(3) "Trust water right" means any water right acquired by the state under this chapter for management in the state's trust water rights program.

(4) "Pilot planning areas" means the geographic areas designated under RCW 90.54.045(2).

(5) "Water conservation project" means any project or program that achieves physical or operational improvements that provide for increased water use efficiency in existing systems of diversion, conveyance, application, or use of water under water rights existing on July 28, 1991. [1991 c 347 § 6.]

**Purposes—1991 c 347:** See note following RCW 90.42.005.

**RCW 90.42.030 Contracts to finance water conservation projects—Public benefits—Trust water rights.** (1) for purposes of this chapter, the state may enter into contracts to provide moneys to assist in the financing of water conservation projects located within pilot planning areas and in water resource inventory areas designated in accordance with RCW 90.42.010. In consideration for the financial assistance provided, the state shall obtain public benefits defined in guidelines developed under RCW 90.42.050.

(2) If the public benefits to be obtained require conveyance or modification of a water right, the recipient of funds shall convey to the state the recipient's interest in that part of the water right or claim constituting all or a portion of the resulting net water savings for deposit in the trust water rights program. The amount to be conveyed shall be finitely determined by the parties, in accordance with the guidelines developed under RCW 90.42.050, before the expenditure of state funds. Conveyance may consist of complete transfer, lease contracts, or other legally binding agreements. When negotiating for the acquisition of conserved water or net water savings, or a portion thereof, the state may require evidence of a valid water right.

(3) As part of the contract, the water right holder and the state shall specify the process to determine the amount of water the water right holder would continue to be entitled to once the water conservation project is in place.

(4) The state shall cooperate fully with the United States in the implementation of this chapter. Trust water rights may be acquired through expenditure of funds provided by the United States and shall be treated in the same manner as trust water rights resulting from the expenditure of state funds.

(5) If water is proposed to be acquired by or conveyed to the state as a trust water right by an irrigation district, evidence of the district's authority to represent the water right holders shall be submitted to and for the satisfaction of the department.

(6) The state shall not contract with any person to acquire a water right served by an irrigation district without the approval of the board of directors of the irrigation district. Disapproval by a board shall be factually based on probable adverse effects on the ability of the district to deliver water to other members or on maintenance of the financial integrity of the district. [1991 c 347 § 7.]

**Purposes—1991 c 347:** See note following RCW 90.42.005.

**RCW 90.42.040 Trust water rights program—Water right certificate—Notice of creation or modification.** (1) All trust water rights acquired by the state shall be placed in the state trust water rights program to be managed by the department. Trust water rights acquired by the state shall be held or authorized for use by the department for instream flows, irrigation, municipal, or other beneficial uses consistent with applicable regional plans for pilot planning areas, or to resolve critical water supply problems in water resource inventory areas designated in accordance with RCW 90.42.010.

(2) The department shall issue a water right certificate in the name of the state of Washington for each permanent trust water right conveyed to the state indicating the reach or reaches of the stream, the quantity, and the use or uses to which it may be applied. A superseding certificate shall be issued that specifies the amount of water the water right holder would continue to be entitled to as a result of the water conservation project. The superseding certificate shall retain the same priority date as the original right. For nonpermanent conveyances, the department shall issue certificates or such other instruments as are necessary to reflect the changes in purpose or place of use or point of diversion or withdrawal. Water rights for which such nonpermanent conveyances are arranged shall not be subject to relinquishment for nonuse.

(3) A trust water right retains the same priority date as the water right from which it originated, but as between them the trust right shall be deemed to be inferior in priority unless otherwise specified by an agreement between the state and the party holding the original right.

(4) Exercise of a trust water right may be authorized only if the department first determines that neither water rights existing at the time the trust water right is established, nor the public interest will be impaired. If impairment becomes apparent during the time a trust water right is being exercised, the department shall cease or modify the use of the trust water right to eliminate the impairment.

(5) Before any trust water right is created or modified, the department shall, at a minimum, require that a notice be published in a newspaper of general circulation published in the county or counties in which the storage,

diversion, and use are to be made, and in other newspapers as the department determines is necessary, once a week for two consecutive weeks. At the same time the department shall send a notice containing pertinent information to all appropriate state agencies, potentially affected local governments and federally recognized tribal governments, and other interested parties.

(6) RCW 90.14.140 through 90.14.230 have no applicability to trust water rights held by the department under this chapter or exercised under this section.

(7) RCW 90.03.380 has no applicability to trust water rights acquired by the state through the funding of water conservation projects. [1991 c 347 § 8.]

**Purposes—1991 c 347:** See note following RCW 90.42.005.

**RCW 90.42.050 Guidelines governing trust water rights—submission of guidelines to joint select committee.** The department, in cooperation with federally recognized Indian tribes, local governments, state agencies, and other interested parties, shall establish guidelines by July 1, 1992, governing the acquisition, administration, and management of trust water rights. The guidelines shall address at a minimum the following:

(1) Methods for determining the net water savings resulting from water conservation projects or programs carried out in accordance with this chapter, and other factors to be considered in determining the quantity or value of water available for potential designation as a trust water right;

(2) Criteria for determining the portion of net water savings to be conveyed to the state under this chapter;

(3) Criteria for prioritizing water conservation projects;

(4) A description of potential public benefits that will affect consideration for state financial assistance in RCW 90.42.030;

(5) Procedures for providing notification to potentially interested parties;

(6) Criteria for the assignment of uses of trust water rights acquired in areas of the state not addressed in a regional water resource plan or critical area agreement; and

(7) Contracting procedures and other procedures not specifically addressed in this section.

These guidelines shall be submitted to the joint select committee on water resource policy before adoption. [1991 c 347 § 9.]

**Purposes—1991 c 347**: See note following RCW 90.42.005.

**RCW 90.42.060 Chapter 43.83B or 43.99E RCW not replaced or amended.** The policies and purposes of this chapter shall not be construed as replacing or amending the policies or the purposes for which funds available under chapter 43.83B or 43.99E RCW may be used. [1991 c 347 § 10.]

**Purposes—1991 c 347:** See notes following RCW 90.42.005.

**RCW 90.42.070 Involuntary impairment of existing water rights not authorized.** Nothing in this chapter authorizes the involuntary impairment of any existing water rights. [ 1991 c 347 § 11.]

**Purposes—1991 c 347:** See note following RCW 90.42.005.

**RCW 90.42.080 Trust water rights in pilot planning areas and in water resource inventory areas—Acquisition, exercise, and transfer—Appropriation required for expenditure of funds.** (1) Within the pilot planning areas, and in water resource inventory areas designated in accordance with RCW 90.42.010, the state may acquire all or portions of existing water rights, by purchase, gift, or other appropriate means other than by condemnation, from any person or entity or combination of persons or entities. Once acquired, such rights are trust water rights.

(2) The department may enter into leases, contracts, or such other arrangements with other persons or entities as appropriate, to ensure that trust water rights acquired in accordance with this chapter may be exercised to the fullest possible extent.

(3) Trust water rights may be acquired by the state on a temporary or permanent basis.

(4) The provisions of RCW 90.03.380 and 90.03.390 apply to transfers of water rights under this section.

(5) No funds may be expended for the purchase of water rights by the state pursuant to this section unless specifically appropriated for this purpose by the legislature. [1991 c 347 § 12.]

**Purposes—1991 c 347:** See note following RCW 90.42.005.

**RCW 90.42.090 Jurisdictional authorities not altered**. It is the intent of the legislature that jurisdictional authorities that exist in law not be expanded, diminished, or altered in any manner whatsoever by this chapter. [1991 c 347 § 13.]

**Purposes—1991 c 347:** See note following RCW 90.42.005.

**RCW 90.42.900 Severability—1991 c 347.** If any provision of this act or its application to any person or circumstance is held invalid, the remainder of the act or the application of the provision to other persons or circumstances is not affected. [1991 c 347 § 30.]